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The FRICtion Factors – what's stopping you change?

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Executive Summary

The concept of 'resistance' is well understood by anyone who has tried to implement change. Even when projects are well run (which they often aren't) and even when the benefits are obvious (which they also often are not), those impacted have an infuriating tendency to push back, finding convoluted workarounds or shadow IT solutions to mimic the old way of working as closely as possible.

Deng et al. summarise the consequences compellingly: "80% of organizations **failed** to achieve on target, 28% were **terminated** before completion, and 43% were **delayed** (Knodel, 2004), 60-75% of new IT system introductions **failed** (Rizzuto & Reeves, 2007). Smith (2004) stated the effectiveness of the organizational change may depend on the attitude of the employees, and 70% failure of organizational change is explained by resistance to change (Buick et al., 2015; Hughes, 2016). The literature suggests that resistance to change can lead to **delays** and additional **costs**, **decreased productivity**, **brand damage** (Lewis, 2019), and even **complete failure** of organizational change (Trice & Beyer, 2001)" (Deng et al., 2023).

This is a disaster for change leaders. Why can't staff just see the obvious advantages of the new way of doing things? Why can't they recognise the inefficiencies or failings of the current system? Why do they resist, when the change is so clearly in everyone's best interests?

I've seen many project teams go down this line of thinking and it can lead to some unhelpful attitudes and actions. Cynicism, frustration or dismissiveness – those resisting must be stupid, malicious or that most pejorative of terms 'laggards'.

But if we take a step back, we can all think of examples of when change was 'done to' us, or happened against our will. Whether in our personal or professional lives, we can all relate to that experience of anxiety about what the future might hold, or that feeling of frustration when we want to change (get fit, stop a bad habit, learn a new skill), but can't seem to make the change stick. Conversely, we can all think of changes we have welcomed with open arms: a new partner, an exciting work opportunity, or a new gadget we can't wait to unpack and learn all about.

So, resistance is perhaps more complex than current change management thinking would suggest. While most change methodologies will assume some level of resistance and suggest that change practitioners create a 'Resistance Management Plan' to address it, very few seem to ask the question about why it happens in the first place. They treat change resistance as a homogenous concept: everyone impacted by the change will feel it, largely to the same degree and for the same reasons. The suggested tonic is usually some version of, "show them the benefits – the WiiFM ('What's In It For Me?')".

So, we build compelling Communications Strategies and Plans, perhaps we build a Champions Network so that we have strategically placed advocates around the business tasked with winning over their colleagues. We conduct a Channels Analysis to find the best

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communications methods. We create a Sponsor Plan to demonstrate senior leadership buy-in. We persuade, we encourage, we mandate. We shout louder and more often. And then we wonder why it *still* doesn't seem to be working – or not quite as well as we'd hoped. Or why people appear to be bought in during the life of the project but then adoption falls off a cliff once the project team has dispersed and the inexorable pull of BAU drags people back into old habits. As the pace of change within organisations increases by the day, terms like 'change fatigue' have started to litter every other conversation.

The scope of this whitepaper

This whitepaper is *not* designed as a holistic approach to change management best practice. The scope is limited to the question of why people resist change, meaning there are lots of elements of change strategy, communications, engagement and upskilling that will be omitted. I will assume that the reader has a basic understanding of the usual change management artefacts, methodologies and activities one would undertake to support the people side of a change project.

The aim of this paper is firstly, to show that 'resistance' is not a single, homogenous reaction to change, but is driven by four separate factors (the FRICtion factors), each of which originated as an evolutionary adaptation that for millennia kept us safe, but which doesn't necessarily serve us well in modern working life.

Secondly, I show that the ways we typically address resistance may in fact be counter-productive or sub-optimal, simply because we are solving the wrong problem. By better understanding the underlying causes, we might be able to tweak our interventions to make them more effective.

The FRICtion Framework Overview

The FRICtion Framework asserts the following hypotheses:

1. There are two basic types of resistance: intentional resistance and unintentional resistance. The term 'unintentional' is used rather than 'passive', as the term 'passive resistance' has been used to describe "opposition to change through hidden behavior, including agreeing but not taking action, delay, concealment of truth" (Deng et al., 2023). I consider this a form of intentional resistance along with outright and vocal opposition.
    a. Intentional resistance (both active and passive) is driven by a negative emotional response to change that is acted upon intentionally.
    b. Unintentional resistance happens when we might intellectually agree that the change is a good thing – we might even have a strong positive feeling about the change – but our psychology or context acts as a blocker

2. Within intentional resistance, there are two main drivers:

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a. Fear – an evolutionary aversion to change that triggers an anxiety response, but not because of the change per se, but rather the uncertainty that accompanies it.
b. Receptiveness – despite the fact that some level of change aversion is a near universal human experience (Blais & Weber, 2006), the magnitude of this negative reaction varies considerably within any given population. This, again, is driven by evolutionary factors; any societal group needs a distribution of different pre-disposed reactions to change, as risk tolerance can be both a positive and negative evolutionary force depending on the external conditions.

3. Within unintentional resistance, we can distinguish another two sub-categories:
   a. Inertia – while studies of neuroplasticity dating back to the 19th century (James, 1890) show that the brain is remarkably adaptable, this process requires rewiring of neural pathways, which is energy intensive. Patterns of thought will default to existing pathways without conscious intervention so new habits and ways of thinking need to be reinforced before they can become the new default.
   b. Capacity – change capacity reflects the fact that the emotional toll of change (Fear), combined with the effort and energy required to embed new habits (Inertia) means that we can only do so much of it before we become overwhelmed. Some will have a larger capacity than others (Receptiveness) and we can optimise our capacity by reducing the cognitive load of our communications and training activities, but we all have a limit, above which no more change can be absorbed.

FRICtion Factor 1: Fear

The Neuroscience of Uncertainty

Have you ever gone out for dinner at a lovely restaurant, looked at the menu and felt a slight twinge of anxiety because everything looked so delicious! What if you pick something that doesn't meet your expectations? What if you get FOMO when you see what your friend has chosen?

It's a ridiculous thought, really: it's highly unlikely anything on the menu will be outright disgusting. Anything you choose will be tasty...just perhaps not as tasty as your friend's selection!

What you're experiencing in this moment is a strange quirk of human psychology: when presented by two uncertain outcomes – even when either one will be pleasant – humans will still experience a stress response (Iyengar and Lepper, 2000).

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This is because we have evolved to see predictability as safe and unpredictability as dangerous, leading us to prefer the familiar to the new, as first outlined in Nobel prize winning work by Tversky and Kahneman (1973). This trips us up in all sorts of ways, from clinging to people who are like us at the expense of diverse perspectives, to making bad investment decisions simply because a company is familiar (Zhu, Qi & Jin, 2023).

In addition to preferring the familiar, we also have a tendency to imagine an uncertain future as being more likely to be negative than positive (Anderson et al, 2019). This represents a potential loss, and another finding of the eminent Kahneman and Tversky (1979) was that we assign around twice as much weight to a potential loss as we do to an equivalent gain.

In the context of change projects, this has important implications.

Reduce uncertainty before talking about benefits

We tend to assume that the main outcome of change communications is helping people understand the benefits (the "What's In It for Me?"). But what if it's not the change itself that people fear – it's the uncertainty? Shouting about the benefits is like a waiter telling me all of the wonderful ingredients in each of the dishes in the example above: it's likely to make me *more* anxious rather than less so. A better tactic would be for him or her to provide a recommendation – sometimes that simple act is enough to give me clarity on the meal I really want.

In a change context, it's helpful to find as many ways as possible to reduce uncertainty: what *do* we know? What can we tell people? Something as simple as communicating at pre-determined times in a predictable way can help reduce the uncertainty. Or even telling people that you don't have the details yet.

An example of this can be seen in the effect of introducing real-time passenger information at public transport stops. Even though objective service performance had not changed, users reported lower perceived waiting times and reduced stress and anxiety (Dziekan & Kottenhoff, 2007) – the only change being access to information that reduced their level of uncertainty.

Practical example

I leveraged this concept in a project I worked on early in my career. It was for a well-known airline during a consultation process – a high-profile and high-risk change. The default position from leadership, HR and Legal was to say as little as possible, and there were good reasons for this: saying the wrong thing could have huge negative implications for the union negotiations, with potentially significant financial or reputational impacts. But in a vacuum, people tend to assume the worst, and any negotiation is more difficult when there is limited perceived common ground or goodwill.

I addressed these risks by creating a communications plan that:

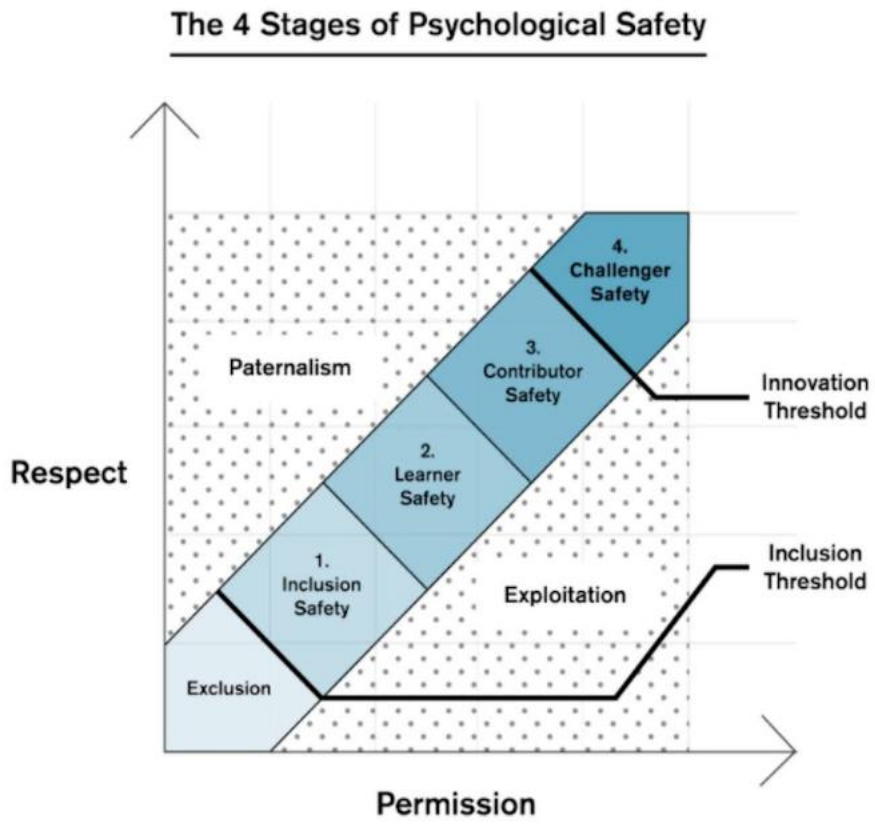
1. acknowledged the emotional toll on all concerned – speaking human to human and aiming to build trust and connection rather than distance.
2. committed to regular communications at predictable time periods and formats (even if there was very little to say)
3. followed through by doing it!

Negativity is normal

A second implication of the research is that we should account for pessimism in how people will imagine the future state and that winning them over may require twice as much by way of potential benefits compared to these imagined losses.

One way to reduce this negativity and fear is through empowering those impacted with as much control over the future state as possible: perceptions of agency and self-efficacy have been shown to reduce fear of the unknown (Carlton, 2016). As Bandura (1977) adds, "expectations of personal efficacy determine whether coping behavior will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences".

This is why it's so important to really engage with those impacted rather than relying on technical requirements documentation or business process maps alone – showing people that their opinions are heard and (more importantly) acted upon can be hugely impactful for overcoming negativity. One important note of caution here is that a fundamental pre-requisite for gaining honest, helpful input from your people is psychological safety. There are numerous definitions of psychological safety but Timothy R. Clark's '4 Stages' model (2020), while flawed, helps show how staff must have a basic level of safety before they will feel safe to contribute:



Change and personal identity

Another factor that's important to consider is the personal dimension of uncertainty.

In change projects, one of the key artefacts we create are Change Impact Assessments. Creasey (2025) outlines 10 key aspects of a person's working life that can be impacted, and

this is a helpful framework for understanding the nature and scale of change for different roles.

Prosci 10 Aspects of Change Impact

However, it fails to account for the fact that work is far more than what we think, feel and do on a functional level. Work is powerfully connected with our self-image and identity (although hopefully not our entire identity). A change can impact not only what we need to do, but who we spend time with, who has power and influence (and who stands to lose it!) and how information and attitudes get communicated through informal networks.

Uncertainty about how a change might impact these elements is often felt on a deeply personal level. As Anderson et al. (2019) explain, "humans engage in a fundamental process of "sense-making" to understand their lives. Personal uncertainty challenges this "sense-making" process and the meaning people attribute to their lives [which can] …then motivate people to manage their uncertainty…One way to manage personal uncertainty is…people become more rigid and closed-minded (McGregor et al, 2001)."

In a project context, this might explain why changes like a restructure (which may appear to be a minor change according to the Prosci model) can face such fierce opposition. To address this, we must first practice empathy to think through not just what someone might have to do differently but all the intra- and inter-personal impacts. Will someone no longer be able to take a break with their friends? Will they lose autonomy or choice about how their work gets done? Will someone have more or less access to leadership? Will they lose visibility or suddenly be in the spotlight?

Once you understand the scale of these impacts, you can work on creating a new 'story' to help people emotionally buy into the change – show them that they matter, that they are important and their work is meaningful. We all deserve to feel like our work makes a difference.

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Checklist

- In planning successful change, work to anticipate and minimise fear.
- Fear is caused by uncertainty more than the change itself – focus on reducing uncertainty before talking about benefits
- People tend to imagine future scenarios as more likely to be negative than positive and Prospect Theory says that we assign twice as much weight to a potential loss compared to an equal gain – account for this in your Change Strategy
- Agency and self-efficacy are key ways to reduce uncertainty – empower those impacted as much as you can in designing the future state
- Recognise the importance of psychological safety if you want genuine engagement
- Consider the impact of a change at the level of personal identity – the greater the impact, the greater the chance people will cling to what they know
- Address this by directly showing how those impacted fit into the 'story' of the change and why they matter

The first of the FRICtion factors is Fear, which is largely tied up in how we experience uncertainty at a psychological level. Our responses are not usually logical, so it's important we meet those going through change as fellow human beings and support them from where they are (rather than where we want them to be). However, if we can successfully tackle this FRICtion factors, the remaining three are far easier to address.

FRICtion Factor 2: Receptiveness

Individual Differences

The literature contains many descriptive studies of characters traits that correlate with increased change resistance, but few explain *why* these differences occur in a population. Why should one person be more pre-disposed to resist change than another? And if there are some positive reasons why people might resist change, should we be treating this resistance as 'bad'?

Change receptiveness varies within any social group

Within any given population, you'll have a spread of different pre-disposed levels of change receptiveness. Some people naturally embrace change, while others are pre-disposed to be more hesitant, and most people fall somewhere in the middle.

The 'Diffusion of Innovation' theory (Rogers, 1962) is the most widely used description of this tendency and was expanded by Geoffrey Moore in Crossing the Chasm (1991) to explain how new technology is adopted throughout a given population. This was intended as a marketing tool, and while the theory and statistical proportions for each group are not scientifically validated, there is evidence in the literature that *risk* tolerance does show a similar pattern of

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distribution (Zhang et al., 2014), with a small proportion (5%) of people being risk positive and the remainder distributed from risk neutral to risk averse (Blais & Weber, 2006).

This early majority 'pull factor' is the basis for the now-ubiquitous Change Champions Network. Change champions are individuals tasked with advocating for the change and if they are sufficiently influential, well-connected and motivated, they can generate a significant 'pull' factor[1].

There are three issues with this approach in practice:

1. Competence: The original theory was a marketing one, with early adopters playing an advocate role. Most change champions are also tasked with communicating key messages and/or playing a 'super user' or upskilling role. These are three separate skillsets, which are rarely found in the same individual (i.e. being influential, being well connected and being good at training).
2. Overload: Given most organisations have multiple change projects in progress at any given time, these same individuals end up being champions for multiple different initiatives. This dilutes the attentional capacity and enthusiasm they can bring to each separate project, as well as their credibility and impact with colleagues.
3. BAU responsibilities: Champions invariably have a BAU role alongside their champion role, and this is usually how they are measured and rewarded. When time is short, the champion role is likely to be what gets deprioritised.

This is not to say that champions networks are no longer required, but change practitioners might do well to consider these factors and potentially allocate each of the different responsibilities separately (*advocating* to senior leaders, *communications* to well-connected roles such as EAs/PAs and *upskilling* to your SMEs – by making them the super users, for example). This also reduces the time commitment and spreads the load in terms of their change capacity (discussed FRICtion Factor 4 below).

How much adoption is enough?

Even with a highly motivated and engaged champions network, change can still feel like a grind – and sometimes stalls entirely. Part of this is due to inertia (see FRICtion factor 3, below), but partly this may be due to a misunderstanding about how change flows through a population and what the end objective is.

The first mistake we make is thinking that change happens in a straight line, but research by Rosabeth Kanter (1977), summarised by Malcolm Gladwell in his (highly recommended) 'Revenge of the Tipping Point', shows that you need around 25% of a population fully

[1] This can be explained by the Social Proof bias – where we look to others in our social group to ascertain what the 'correct' or 'normal' behaviour is.

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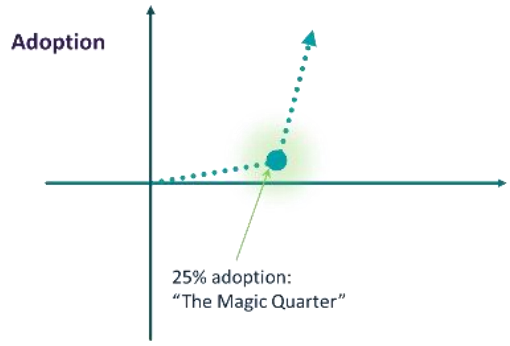
supportive of a change before anything happens. Less that 25% and change is in danger of stalling and backsliding, but once you hit the 'magic quarter', change snowballs.

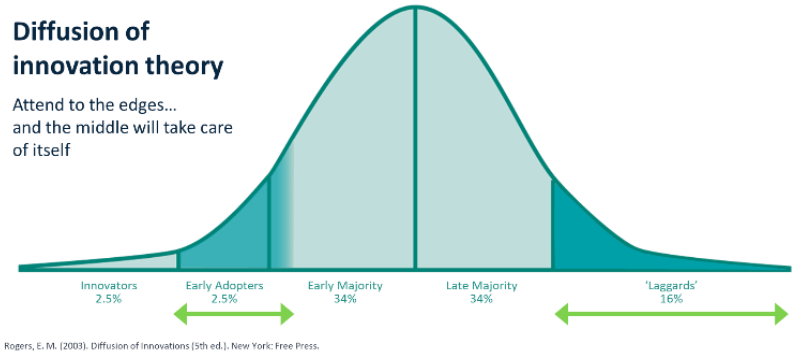


Malcolm Gladwell 'Revenge of the Tipping Point'

However, the eagle eyed among you may have spotted a problem with this theory: what if you have 25% (or more) of the population actively working *against* the change? This, of course, is why *intentional* resistance can be so damaging to a project (as opposed to apathy). Here, it's worth exploring the psychological forces at work at the back of the change curve, with the so-called 'laggards'.

Understanding 'laggards'

I've always disliked the term, 'laggards'. It's a highly pejorative term that treats this group as somehow backwards and inferior. Laggards are a problem to be dealt with, to be 'managed'. Some suggest ignoring them, others bullying them, but there's rarely any attempt to understand what's going on for these individuals or an appreciation that their behaviour might be anything but troublesome.



Rogers, E. M. (2003). Diffusion of Innovations (5th ed.). New York: Free Press.

But history provides an interesting counterpoint to this assumption that change resistance is de facto 'bad'. In Ancient Greece, Mnemōnes or 'memory magistrates' were officials whose job it was to remember and authenticate public agreements, laws, and contracts on behalf of the community in a time before writing (Canevaro, 2020). Similar roles (i.e. individuals tasked with accurately remembering and transmitting important information) were English 'bards' or 'scops' (Foley, 1992), Brahmin reciters in India (Staal, 2009), West African Griots (Hale, 1997) and Aboriginal Songmen/women in Australia (Ross, 1986).

To have such consistency across geographically diverse and isolated populations doesn't happen by accident – there must be something evolutionarily advantageous to this practice for it to be so widespread. These were individuals who went to enormous lengths to learn how to remember histories, genealogies and other important information exactly. For them, changing the script was a failure in their duty to their community. They were the cultural custodians, enabling lessons from the past to be retained as a resource to protect future generations.

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You might argue that now that we *do* have writing, the role is obsolete, but with the increasingly overwhelming volume of written communication, it could be said that the role of 'cultural custodian' may be more essential now than ever. In fact, given the proliferation of misinformation combined with AI hallucination, how trustworthy is the written word these days? And when trust in leadership is low, employees may rely on these individuals to provide context for interpreting the narrative coming from the top.

Seen in this more positive light, the 'laggards' could be seen as playing an important role in stabilising organisational culture and acting as a the custodians of corporate memory. This is often how these individuals see themselves – in one study, individuals identified by HR as generally change resistant insisted their resistance was in the long-term best interests of the company (Kulkarni, 2016).

We might better see this role as to stress test change, to make sure it's genuinely going to make things better. (Let's face it, we can all think of change initiatives that *didn't* end up delivering the promised benefits or added unnecessary cost, effort or complexity compared to the status quo!). Once the change has taken place, their job is to encode it into 'how we do things around here'. They actively police the processes, bringing much-needed consistency and ensuring a common way of working (however infuriating this dogmatism may feel to some).

Therefore, if you can get your custodians on side, they might be your biggest asset on a change programme – but they won't be won over easily. They have a high bar for the changes they will support.

Two activities can help get the most from this group:

1. **Get them involved early**. Give them the role of 'critical friend' – tell them you want them to tell you all the reasons why the change *won't* work. They might throw up endless challenges and problems, but these can help you anticipate things you might not have considered. They tend to have long tenures and in-depth knowledge of the organisation – this insight is valuable.
2. **Honestly consider how the change fits with the existing organisational culture and social norms**. Is the change genuinely enabling positive change or might it be the latest management fad? At time of writing, for example, every organisation is jumping on the AI bandwagon when many

Practical example

At one client, we were rolling out a new piece of software that would change the way staff ensured compliance checks were done on new clients. There was one partner who was known to be very vocally opposed to change. I spent an hour with him, asking why the change *wouldn't* be successful. The first 45 minutes was spent with him angrily telling me all the reasons why it was a terrible idea and why change was always handled badly within the organisation. But then something magical happened: he paused, took a breath, then admitted that the current situation wasn't great either, and if the new tool could solve some specific problems, it might be OK. I made a note of these specific challenges and played them back to the technical team. Not every problem could be solved, and the solution had limitations (as all solutions do), but I found out the following week that he had called the managing partner and told them this was the way all changes should be done. As a member of the project team told me recently, "that project changed the way we think about change here – it's still referenced as one of our most successful projects".

organisations might be better placed to take a 'first follower' approach or wait for the numerous technical, governance and ethical kinks to be ironed out.

Checklist

- The uncertainty of change is experienced as a risk (see FRICtion Factor 1: Fear)
- Change receptiveness can therefore be loosely correlated with risk tolerance
- While most (95%) humans are risk neutral to risk averse (Blais & Webers, 2006), there is significant variation along that spectrum
- Having heterogenous risk tolerance within a social group is not just normal – it's advantageous: having a few individuals willing to take risks might lead to new opportunities, but too much change risks losing valuable lessons from the past
- Traditionally, we tend to focus on early adopters to 'pull' others along the change journey – this works, but only if these individuals are playing to their strengths and not overloaded with multiple projects
- Work with risk averse individuals (rather than against them) can be extremely beneficial in enabling change
- They can help you meet the 25% needed for change to snowball to full adoption

Unintentional Resistance

The first two FRICtion Factors (Fear and Receptiveness) relate to intentional resistance – i.e. negative feelings, thoughts and behaviours that block successful adoption of change. This can be 'active', such as vocal opposition or explicit refusal, or 'passive', such as subterfuge, deliberate inaction or absolute minimal compliance (Deng et al., 2023). The latter may be less obvious than overt opposition, but can be even more damaging, as these behaviours often go under the radar until it's too late. I consider both of these types of opposition to change to fall into the category of intentional resistance.

Most of the research on change resistance relates to these types of reactions, but in recent years I've come to appreciate that the assumption that staff will resist change may be a little outdated. Yes, organisations are still struggling to implement change successfully, and yes, this failure is as costly as ever, but my experience is that malicious and intentional resistance is not nearly as prevalent as it was perhaps a decade ago.

Instead, we're seeing a rise in half-completed projects and a permanent state of sub-optimal adoption. An organisation might deploy an IT system or a new operating model, for example, but a year or two later, the system is seen as just as bad as the previous one, or the operating model has resulted in confusion and complexity. A restructure might have been completed on paper, but most people are still following old business processes and no-one is quite clear on their new role.

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As these failed projects pile up, staff become cynical and exhausted. In these cases, it seems unfair to label resistance as active *or* passive – people may fully recognise the problem a new project is intended to fix, they simply lack the confidence, energy and resources to embed yet another change into their already overwhelmed brains.

So, what's happening here, and what can we do about it?

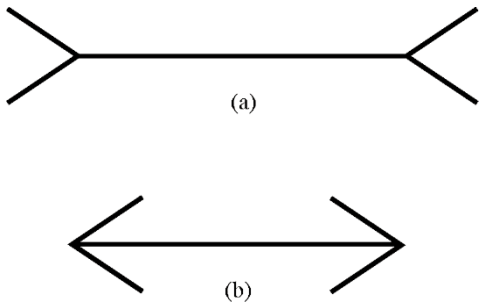
The final two FRICtion factors relate to our ability to absorb change – regardless of how we feel about it. They outline the hard limits we must consider if we are to be realistic about what's possible, and some suggestions for how we might effectively navigate these boundaries.

FRICtion Factor 3: Inertia

Habit, Effort, and Neuroplasticity

Have you ever made a New Year's resolution? More importantly, have you ever kept one beyond January 31st? A New Year's resolution is the best example of a change that we fully embrace emotionally and intellectually. We know that the change will make our lives better, and we desperately want that future state that we imagine will transform some aspect of our lives (regardless of whether the reality would actually deliver!) And yet, more often than not, we can't seem to make it happen.

The difficulty we have in breaking bad habits and embedding better ones can be hugely frustrating and demoralising. It can make us feel lazy, undisciplined or inept. But when you understand the neuroscience, it becomes clear that our expectations are wildly optimistic in terms of what realistic.



Before reading further, watch this video on YouTube: Whodunnit- YouTube. We'll return to this later.

Now look at the two lines in the image on the right. Which is longer: a) or b)? Even when we know they are identical, we still struggle to *see* it.

That's because our brains rely heavily on mental shortcuts called heuristics. Heuristics are patterns of thought that help free up cognitive bandwidth – if we noticed everything around us and gave it all equal weight, the amount to information would be incapacitating (which of course is how some autistic individuals experience the world).

So, our brains spot patterns, and make predictions and judgements about what's important and what isn't. Usually, these are usually fairly accurate. For example, studies show that we 'see' things slightly before the neural signal reaches our brain (meaning what we experience

as sight is actually our brains guessing what we're about to see (Johnson et al., 2023). But if you watched the video above, you'll see just how much we miss – and that most of the time we don't even realise what we're missing.

Studies of neuroplasticity (James, 1890; Konorski, 1948; Hebb, 1949; Bach-y-Rita et al., 1969) have shown that it is possible to break some of these patterns of thought – in fact, the brain is remarkably adaptable under the right circumstances, but that this requires a) conscious effort and b) significant reinforcement over an extended period.

I like to think of it like walking through a forest on a familiar path. Someone tells you there's a better way of getting from A to B but it means cutting through the undergrowth. It's *possible* with the right tools but it takes much more effort. Eventually, you will create a new pathway and the old one will become overgrown, but it's energy intensive. If the old path is available and you urgently need to get from A to B, you're likely to take the old route out of expediency, inadvertently reinforcing *that* path instead of the new one[2].

This is important because inertia is a very different type of resistance compared with intentional resistance. Even if people are totally bought into the value of a change initiative, you need to support them to embed it through repetition and reinforcement or they will slip back into old habits and all that initial effort will be wasted.

The following tips relate not only to training but also project communications. After all, both require us to absorb and internalise new information, and think and behave differently. That's why it's often more effective to treat communications and training workstreams as interconnected: peppering communications with learning content and reinforcing key messages during training.

Motivation

Noel Burch originated the concept of the four stages of learning, where one passes from unconscious incompetence (you don't know what you don't know) through conscious incompetence (how most of us felt when we drove a car for the first time) to conscious competence (perhaps when performing a hobby or practising a skill) to unconscious competence (such as walking, for those who are able to do so).

Passing through these stages is hard – and especially so on a change project, given we are more likely to predict the future state as negative than positive, and that we assign twice as much weight to a potential loss compared with an equivalent gain (see FRICtion Factor 1: Fear above). Even when we are fully bought into a change, passing through this zone of conscious incompetence is painful (remember that New Year's resolution?) and once the initial enthusiasm has worn off, the future benefits can feel less important than the current pain.

[2] This is why it's so important to remove the old system or way of working wherever possible.

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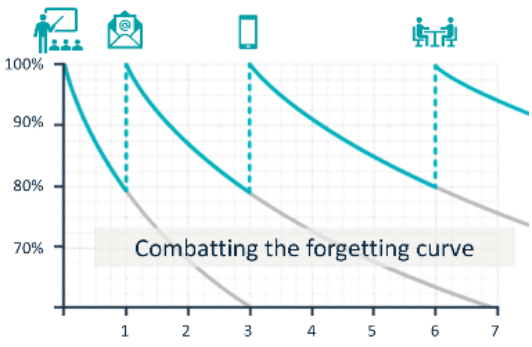
While motivation is rarely sufficient to embed new habits, it's near impossible without it. It's why it's so important to spend time understanding the unique impacts of any change on different roles within an organisation and building tailored benefits cases to help persuade them. The key word here is 'unique' – too many communications strategies talk about the benefits of the change to the business. If you're lucky, your people will be personally invested in the success of your organisation and/or what you deliver to your customers…but I wouldn't rely on it! You will be far more effective if you truly seek to empathise with what your people care about and the nuances that exist within and between different teams. As an added bonus, the mere act of asking people about their needs and priorities can be surprisingly powerful in generating engagement and goodwill[3].

Rewiring the brain



The Ebbinghaus Forgetting Curve (Ebbinghaus, 1913) was an early exploration of what happens when we don't properly reinforce new learning. It shows that we forget most of what we learn within the first few days. This is why traditional classroom training is rarely effective on its own: we might engage with the content in the moment, but the brain cannot transfer all new information into long-term memory. It needs a signal that the information is important enough to both store and retain – and that it is more important than all the other competing information our brains will receive each day.

Embedding new habits requires:

1. *Selection* of information to transfer from working memory to long-term memory
2. *Transfer* of that information from working memory to long-term memory
3. Subsequent need to *retrieve* that information or *practice* that skill.

Selection

As we've already seen, we ignore vast amounts of data each day. We couldn't function if this weren't the case, so how does the brain decide that something is worth retaining?

Emotions

Evidence shows that information that provokes an emotional response is more likely to be remembered (Tyng et al., 2017). Kensinger (2009) further elaborates that negative emotions have a stronger effect than positive ones. In terms of application within a change context, this explains why the Conner's 'burning platform' for change is such an enduring metaphor as it

[3] The mechanism behind this is the principle of reciprocity: most humans are hard-wired to feel an urge to pay back an act of kindness or generosity. It's one of the nicer human biases.

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focuses on the dangers of the current state (Conner, 1993). However, given the negative impact of chronic stress on perceived self-efficacy, attentional capacity and general memory recall (see FRICtion Factor 1: Fear and FRICtion Factor 4: Capacity), it is recommended to supplement this messaging with a positive vision of the future to avoid cynicism, apathy or burnout.

Storytelling

As we saw above (FRICtion Factor 2: Receptiveness), stories are an important evolutionary mechanism by which we encode and transfer information between generations. Research (Green Brock, 2000; Isberner & Richter, 2018; Vaccaro et al., 2021) confirms that we remember information much more effectively when it is structured as a story, so this can be an especially powerful way of enhancing the stickiness of communications and training content. Examples might be showcasing specific examples of pain points that people are experiencing with how the proposed change will make life better (and publishing success stories after the fact) or explaining training content using specific rather than generic examples. It can also be helpful to consider the change as a 'hero's journey', making those impacted the protagonists, change practitioners as the guide, and the current way of working as the 'villain' that must be overcome to achieve the desired future state.

Transfer

Assuming we are sufficiently motivated and/or convinced that information is important enough to transfer to long-term memory, the process of transferal still needs to take place at a cognitive level. The effectiveness of this process is heavily influenced by cognitive load theory, which I will cover in detail in the FRICtion Factor 4: Capacity section (see below). For now, let's assume this has taken place. Is that enough to say the change has been embedded? Sadly not, and this is the stage many change practitioners speak about but rarely have the resource to execute properly.

Retrieval or practice

As the saying goes, "use it or lose it!". The more often we retrieve information, the more hard-wired it becomes. We can support this process during change projects by finding ways to include retrieval within our training strategy. This starts right from the first training intervention: short quizzes interspersed within chunks of training content can significantly improve retention, even months later (Roediger & Karpicke, 2006), so building in appropriate, low stakes tests are more effective than simply consuming the training content alone.

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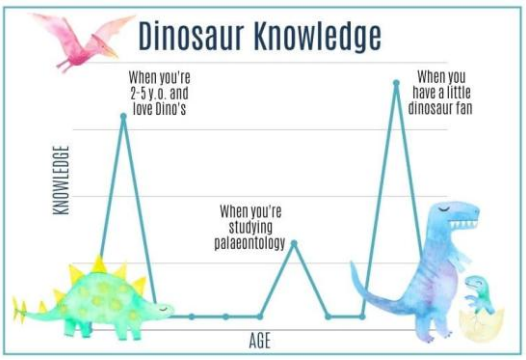
But given how plastic the brain is – constantly optimising its storage capacity to align with the current needs of the environment – we cannot expect knowledge that is important at a particular point in time to be retained indefinitely. This concept that learning must be reinforced is obvious, but precisely how we can best apply this in practice may be less so.



Cepeda et al. (2008) have studied the optimal period between learning events and found that there is wide variation in knowledge retention depending on this 'spacing effect'. Test subjects were given two training sessions spaced between zero days and three months apart. They were then tested on how much they remembered from seven days up to a year later. The differences in retention were dramatic – a 64% difference between the worse and best gaps. The results were non-linear, but the most relevant finding for our purposes was that:

1. If people need to remember information **a week after training**, they should have (at least) **two training events spaced a day or two apart** (but no closer).
2. If they will not need to remember that information **a month after training**, then **a gap of seven to ten days** is ideal.
3. If you don't have this flexibility, **increasing the gap between training sessions is less damaging than decreasing it** – shorter gaps had a much more dramatic negative effect than increasing it (Cepeda et. Al, 2008).

So, how much time does it take for a new skill to become a habit? As you'd expect, this very much depends on many factors, such as complexity of task, individual motivation and level of proficiency required, but Lally et al. (2010) showed that with daily practice, new behaviours became automatic at around two months (66 days). A meta-analysis conducted by Singh et al (2024) backed up this figure of roughly two months for habit formation. This has a couple of implication for change programmes:

1. Ensure that training support continues **for at least two months after the 'go live'** of any new changes
2. It could be worthwhile **communicating this statistic** to those impacted, both to manage expectations and to reinforce the importance of daily practice[4].

[4] The variation was large, however – ranging from 18 to 254 days (Lally et al, 2010).

Checklist

- Our brains rely heavily on mental shortcut – most of our thought processes are automatic
- The aim of a change programme is to support people to embed new habits into automatic processes
- Motivation is necessary but not sufficient: find out what people really care about and build your benefits around them (not the business)
- We remember information that provokes an emotional response and/or is told as a story more readily that other types of content
- Include low stakes quizzes during training
- Adjust the gap between training sessions depending on when the person will need to use the learning
- Allow at least two months of support after 'go live' to embed the new habits.

Practical example

One client I worked with had a very decentralised workforce of around 40,000, spread across multiple depots and regional offices. Many were frontline workers, with an average reading age of 10, and there was a huge variation in levels of digital skills and confidence. We did a series of roadshows with in-person presentations and a team of floor walkers with ipads to show people what to do in real time. We then did train-the-trainer sessions, equipping them to run follow up sessions. For those who were office based, we provided a 'single-source-of-truth' intranet page with all the training collateral: guides, videos, top tips.

FRICtion Factor4: Capacity

Cognitive Load and Overwhelm

This final type of unintentional resistance relates to our capacity for change. Think of it like a river. The rate at which water flows through the river can be equated to the amount of change we can process. Some people might naturally have a wider or deeper river than others (FRICtion Factor 2: Receptiveness), meaning they can cope with more change before bursting their banks, but the volume is still finite: no-one's change capacity is limitless.

Seen through this lens, we can posit two ways to ensure the river doesn't overflow:

1. We can remove obstacles that might impede the flow of water (change).
2. Or we can reduce the rate of flow (i.e. change) into the river from its source.

Factors that make it harder to process change

Continuing the river analogy, imagine the difference between a free-flowing river and one clogged with old shopping trollies, tree branches and other debris. The volume of water that can flow through the first is much greater. When we undergo change, there are two factors that can significantly reduce our ability to process change.

Stress hormones

In the FRICtion Factor 1: Fear (see above), we identified fear of uncertainty as one reason why people might have a negative reaction to change. However, we didn't explore the impact of

fear on our cognitive capacity. When human experience fear, the body releases glucocorticoids, the most well-known of these being cortisol. While a large dose of these can enhance memory creation (which is why we tend to remember frightening experiences clearly), it impairs both our working memory (i.e. processing of information in the moment) and our ability to retrieve previously stored memories (De Souza-Talarico et al., 2011). This has implications both for productivity during a high-stress change programme (i.e. employees' ability to work effectively on everyday tasks) and also the effectiveness of any training activities: people will find it harder to remember content they have learned.

Refer to FRICtion Factor 1: Fear (above) for recommendations on how to reduce fear and increase psychological safety as this is a critical enabler for project success[5].

Working memory limitations

We have already seen that encoding new information to long-term memory requires conscious effort. It feels difficult – even producing physiological symptoms like heart rate variability compared with embedded knowledge and skills, which feel effortless and automatic (Paas & van Merriënboer, 1994). This is because our working memory capacity is limited – only a few chunks of information can be processed at any one time (Kalyuga et al., 2003). It is therefore essential that this limited cognitive capacity isn't wasted on extraneous tasks. On change projects, those impacted are often subjected to long, convoluted emails which use jargon, 'corporate speak' or veiled messages that make it difficult to understand. 100-slide PowerPoint presentations may look beautiful but fail to explain what readers actually need to *do*! Conversely, a presentation that has the right content but looks terrible is likely to be screened out by today's employee, who is used to shiny social media content that's optimised for engagement – a boring PowerPoint simply can't compete with our increasingly limited attentional capacity. Below, I'll present some evidence-based ways of reducing cognitive load and maximising attentional capacity to ensure your people can absorb change-related messages as easily and effectively as possible.

Factors that make it easier to process change

Link with existing knowledge

Change is easier to absorb if it can be related to what we already know. This is known as elaborative encoding – the process by which we link new information with existing schema in the brain (Kalyuga et al., 2003). So, for example, when we drive a different model of car, we don't have to learn to drive from scratch. A professional musician can learn a new piece of music quickly because the ability to play individual notes and read music are fully embedded. On change programmes, if we can link new systems or processes to ones people are familiar with, it will be far easier for them to embed in their existing knowledge. This could mean

[5] It's worth noting that moderate levels of stress may actually help lay down memories, meaning you don't have to remove stress from the process entirely.

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giving worked examples based on existing processes, or using analogies that are specific to their industry or function.

Remove the superfluous

Linked with the above, it's important to remember that while the professional musician is only focused on what's new (i.e. the specific piece of music rather than where middle 'C' is on the keyboard), part of being a novice learner is that they cannot distinguish between relevant vs irrelevant information (Paas & van Merriënboer, 1994). If you drive, do you remember how completely overwhelming it was the first time you did it? But once you are proficient, you focus only on how the buttons might differ in a new car, for example, rather than worrying about checking your mirrors, remembering to signal, giving way at roundabouts etc. This is why it's so important to keep as much as possible *the same* during communications and training activity: use existing company branding, keep key words and phrases consistent, use learning channels users are familiar with, or customise the system interface to look as similar as possible to the previous system. It certainly means that any screenshots included in training materials should be identical to what users see when they log into a system, or users will be distracted trying to figure out why some things are different rather than focusing attentional capacity on the task[6].

Multimedia learning

We use different parts of the brain to decipher words vs pictures, each of which has its own capacity (Mayer, 2001). By using media in combination (for example, by including pictorial representations as well as words on a PowerPoint presentation, or creating a video animation with spoken word voiceover), we significantly increase the amount of cognitive capacity available to absorb and retain the information being communicated as well as supporting the process of embedding knowledge. In fact, 100% of 11 comparison tests showed that "learners who received words and pictures performed better on transfer tests than did students who received words alone"[7] (Mayer, 2001).

Link elements spatially and temporally

While multimedia learning can reduce cognitive load, the elements must be presented close to each other in either space (for static content) or time (for audio-visual content); otherwise the audience will waste cognitive capacity having to piece the elements together, sometimes

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[6] This is a real challenge with evergreen cloud technologies, which are constantly evolving, meaning training content is out of date almost as soon as it's created. But this also illustrates the point: if you search YouTube for an instructional video on how to use a Microsoft application you have never used before, for example, it will be very difficult to find something you can trust to be accurate and up-to-date. But once you are familiar with that application, it might be irritating when a button moves or a new feature is released, but you quickly assimilate that new knowledge into your existing schema for that tool.

[7] Adding subtitles as well as narration to a video was shown to overwhelm the visual mode and result in poorer learning outcomes. However, from an inclusion perspective it's essential to cater to diverse needs, so we'd always recommend including subtitles for any spoken-word medium.

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call the 'split-attention effect' (Kalyuga et al, 2003). This may seem obvious and not particularly helpful – when creating training content, for example, it would be odd to include a screenshot for a new system in a different section of a user guide than the accompanying step-by-step instructions. However, this fails to account for the fact that communications and training content is usually shared and stored in a place and time that suits the project team rather than when the person impacted is actively thinking about, or working on, the change. One way to address is to have a dedicated space (perhaps a SharePoint site or dedicated intranet page) where all materials related to the change are stored. Those impacted can then immerse themselves in the topic at a time that suits them, rather than having work-related cognitive processes interrupted by change-related communications or training. Even better, having key message and instructional content embedded *within* a new system avoids users having to waste cognitive load finding and referring to external content. Many in-app solutions now offer this type of upskilling capability.

Break down learning into chunks

You can think of this either in hierarchical or modular terms, depending on whether the aim is a single mastery of a complex skillset or ability to complete discrete tasks effectively. Either way, learning, practising and embedding smaller packages of information is easier than tackling large bodies of content (Paas van Merriënboer, 1994). This is where traditional training approaches can fall down, although the practicalities of modern work mean it's usually the only way to carve out sufficient time in employees' diaries to dedicate to learning. Even within a traditional (or virtual) classroom setting, it is possible to break down learning into smaller chunks which should be fully practised and reinforced before moving onto to the next training item; these can then be supplemented with Quick Reference Guides, 'bite-size learning', 'lunch-and-learn' sessions or top tips to reinforce learning after the training session.

Aesthetics

While I would love to think the quality and obvious intelligence of my work should speak for itself, it's really the designers who have the power to make or break most communications content. In fact, I'll be extremely surprised if more than a handful of people ever read this sentence, given the sea of text you'll have had to wade through to reach this far. It's a sad fact that tall men are seen as more competent than short ones (Judge & Cable, 2008), and attractive people are judged as more honest and intelligent (Dion et al., 1972) – this is called the 'halo effect' and it means that if your work is not attractive, the content will be seen as of lower value.

Not only is beautiful content seen as more trustworthy and intelligent, it's also easier to process from a cognitive point of view (Okuhara et al., 2017; Alter & Oppenheimer, 2009). Okuhara et al., (2017) present these proven recommendations for reducing cognitive load:

- Use a clear font on a high-contrast background

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- Use language which is lexically and semantically ease to parse (i.e. simple words and sentence structure!)
- Use round numbers (e.g. “about 100” rather than “103”)
- Limit the number of key points to no more than five – readers won’t remember more than that
- Help your audience imagine themselves in a positive but plausible future – the more realistic the mental image, the easier it is to remember

While investing in specialist communications support and creative design might feel like an extravagance, it could make the difference between your message being heard and understood, or screened out. If you’ve ever felt like tearing your hair out because you communicated something ten times and people still complained they weren’t made aware…now you know why! And if you think it’s just communications that need to look good, think of the last time you received a new gadget with a poorly designed user guide that was more than a side of A4. It was probably a decade ago.

Reducing the flow

When we consider the volume of change people are trying to cope with, it isn’t just within an organisational context. We are all undergoing multiple changes in our personal lives as well as macro-economic, geopolitical, technological and societal changes too. These are changes we have limited control over and which add to the load. Think of these like tributaries of our imaginary river - in a downpour, each of these is pouring water into the river, increasing the flow until the river bursts its banks. This is what we appear to be seeing in multiple spheres of modern life, leading to growing cynicism and change fatigue in the workplace (Buick et al., 2015; Stensaker & Meyer, 2012) and a mental health crisis in the general population.

We can’t control these external factors, but there is one tributary we do control. In this instance we can choose to dam the river, releasing water when rainfall is low and restricting it when rainfall is high, thereby ensuring that the river doesn’t flood. Given current levels of uncertainty, this may be wishful thinking, particularly in industries or organisations facing high levels of disruption or competitive pressures. But many companies treat change as something to be pursued for its own sake, rather than as a finite resource to be used sparingly and intentionally. Gartner research shows the number of change projects organisations embark on rose from two per year in 2016 to ten in 2022, while employee support for these initiatives dropped from 74% to 38% (Gartner, 2023).

This has real consequences and the negative effects extend beyond an individual project’s chance of success. Humans are not machines and change is not the solution to every problem. This might seem odd for a change professional to say, but I truly believe we should be doing *less* change, but doing it *better*. That means ruthlessly prioritising the initiatives that really matter and investing in properly supporting those impacted to fully adopt and embed them.

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Checklist

- Chronic stress can negatively impact the absorption and retrieval of new information – work to reduce anxiety at the front end of any change project
- Working memory is limited – use that attentional capacity wisely
- Techniques that can reduce the cognitive load associated with deciphering new information (whether in communications or training materials) include:
    - Link with existing knowledge
    - Remove the superfluous
    - Multimedia learning
    - Link elements spatially and temporally
    - Break down learning into chunks
    - Aesthetics
- But remember that our capacity for absorbing change is limited – be ruthless in prioritising your change portfolio and building in time for embedding. Change overwhelm can compromises the effectiveness of *all* your change projects – and could even threaten the organisation as a whole

Conclusion

So we have these two very different types of resistance and four FRICtion Factors to consider:

- Intentional resistance, which is driven by fear and underlying levels of receptiveness to change, and
- Unintentional resistance, which is driven by inertia pulling us back into what's familiar and easy, or simply a lack of capacity to take on any more change.

But if I can leave change leaders with one takeaway from this whitepaper, it's that there is no magic bullet which will suddenly make your people able to absorb infinite volumes of change. While it's possible to reduce the friction by understanding the FRICtion Factors, there are hard limits beyond which you risk burning out your people and ending up with yet another failed change project that adds to the problem rather than solving it.

The suggestions in this whitepaper offer a starting point, but given that change is a human process, there is no point at which we, as change practitioners, can say that we are 'done' – that we know how to effect successful change. It's a constant learning process, and just as our environment and the external pressures we face are constantly evolving, so we must continue to challenge our current thinking and adapt our approach to meet the needs of the people going through change.

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