

THE ICEBERG PRINCIPLE

*“Picture an iceberg.
The bulk of its power lies below the surface.”*
– Robert White

It's time to talk icebergs...

As we all know, icebergs – literally ‘ice mountains’ – are formed when glaciers or ice sheets meet the sea and pieces break off or ‘calve’. They are then blown, or drift on currents, gradually melting as they are exposed to water – and sometimes air – that's warmer than its melting point of 0°C.

They float because they are less dense – in other words, lighter than the equivalent volume of water. This is a curious phenomenon because, as I was taught in school, water is the only substance that actually becomes less dense when it freezes. (All other elements but water freeze from the bottom up as they sink when they become solid. But water freezes from the top, providing a layer of ice to insulate the water below from the cold and allowing aquatic life to continue.)

Here's the elementary physics of icebergs: the density of seawater is 1.025 tonnes per cubic metre (fresh water is 1.0 tonnes/m³) compared to 0.920 tonnes for the same volume of ice. Based on Archimedes Principle that a body will displace its own weight in liquid, that means a one cubic metre block of ice will displace only 0.920 tonnes of water, equivalent to 0.898 (0.920/1.025) cubic metres, leaving 0.102 cubic metres of the iceberg above the waterline – that's 10% as near as makes no difference.

INTERESTING FACT: *A metric tonne was defined by the weight of one cubic metre of fresh water. A metre was derived from the distance from the equator to the poles – a kilometre is 1/10,000th of the distance, making a metre 1/10,000,000th.*

‘The Tip of the Iceberg’

All this means we only see ‘the tip of the iceberg’ – the top 10% - leaving 90% hidden below the surface, which is why we use the expression as a metaphor for things that have ‘hidden depths’, where there is significantly more going on than may appear on the surface.

But the big mistake we often make is to assume we know what’s going on, that the 90% is just like the 10% we can see. So we often use ‘tip of the iceberg’ to mean lots more of the same, much like ‘the thin end of the wedge’.

Which leads us to another important aspect to the iceberg concept. Icebergs are not uniform, so it’s actually impossible to know exactly what they look like underneath the waterline. We can make assumptions – and often these will be wrong – based on previous experience in different contexts. The only way to know for sure is to take a ‘deep dive’ and take a look to see what’s really happening.

The Iceberg Model of Systems

You won’t be surprised, I’m sure, to know that there are a whole load of different iceberg models out there.

- Sigmund Freud used an iceberg model early in the 20th Century to explain how the mind works, with the conscious mind above water and the unconscious below. As with other systems it’s the hidden, unconscious part that determines most of our behaviour.
- Edward T Hall adapted this in 1976 to come up with his Cultural Iceberg Model, suggesting that most aspects of a culture are assumed and not necessarily immediately obvious from simple observation.
- Then there’s the Iceberg Competency Model (Spencer & Spencer) that shows knowledge and skills above the surface, and attitudes, beliefs and other aspects of mind-set below the water. But it really stretches the analogy by using the percentages of 20%-80%, and we know that’s not true of real icebergs, don’t we?
- Edgar Schein of MIT Sloan School of Management took Hall’s theme and applied it to Organisation Culture.
- Another great thinker at MIT, Peter Senge, researched systems thinking (which we’ll be looking at later, in Part 3) as applied to organisations. Michael Goodman distilled much of this thinking into his 2002 iceberg model.
- Otto Scharmer, who studied under Schein and Senge, also takes the iceberg concept, applying it this time to explain the structure of our entire global system – social, environmental and economic – incorporating many of the elements from Goodman’s model.

It’s Scharmer’s model that I’ll mostly be building on here, but I’ll be adapting much of the terminology as his version is designed for a more academic audience, and I’m not that way inclined!

I'll be building on this model as we progress so that, by the end you'll have a complete 'Iceberg Model of Systems Communication'.

In simple terms, there are four levels, and in this book I'll be applying these to explain how systems work in general, as well as looking at some specific examples in Part Two. For your purposes, you may like to think about how these levels apply to your workplace as 'the system', and consider how they work in your situation. This may help you to see things differently and get some new insights.

The four levels, then, are:

1. **Problems and behaviours.** These appear above the waterline and are the symptoms of what lies beneath. Our response to problems is often to ignore them – “Not my problem” or, “It'll go away.” – complain about them, find workarounds, or even subvert the system by carrying on doing things we know will actually make matters worse. Sound familiar? *[Example: when I was working at Clarks Shoes in the 1980's workers downed tools and we had a company-wide strike.]*
2. **Causes.** These are the things that are the immediate cause of what goes on above, and usually these are what get treated when we look for solutions to the problems we see. This is where 'sticking plaster' solutions occur – the problem is fixed, but the fix may cause other problems later or elsewhere in the system. *[The strike was called because of a dispute over piece-working rates in one of the factories.]*
3. **Processes and Procedures.** This level is really the heart of the system. It's what makes the system work and produce repeatable, predictable results. Usually the real cause of the problems we see are the result of flawed process, often because things have changed and the process hasn't kept up. Generally this stems from the system not having adequate feedback mechanisms so it fails to respond to external change. *[There had been a number of smaller, apparently unrelated disputes around the company, most of which management attributed to dissatisfaction with pay and conditions associated with the piece-working process.]*
4. **Operating Philosophy.** This comes from a whole range of deep level elements including values, beliefs, ideology, culture and identity. It's 'what makes it tick' and we're largely unaware of it. In an organisation it determines 'how we do things around here'. And ultimately, what drives it all is purpose. Purpose is the source of all our actions and therefore all our problems. *[A McKinsey report highlighted that the real issue was factory workers not feeling valued, and being treated as mere production 'resources'. Management weren't engaging workers on a level that mattered to them. As one production worker said to me at the time, "They're not interested in what we do, we might just as well be making Mars bars for all they care."]*

In the Clarks example (and they were actually among the best employers in the manufacturing sector) the solution lay not in improving piecework rates or

pay and conditions, but in healing the disconnect between them and the shop floor. They needed to care – and show they cared – about the people and about the product. Management by numbers and a focus on KPIs (Key Performance Indicators) was killing the business.

The outburst against piecework rates that triggered the strike was in fact just 'the tip of the iceberg' and the actual cause looked very different once what was going on beneath the surface was properly understood.

From the example you'll see that for a system to be fully functional, all four levels need to be working together in perfect alignment. How often does that happen?

Even for us as individuals it's a big ask. So for complex systems involving large numbers of people as well as other systemic variables, it's easy to see how tricky it can be.

I think perhaps we should cut some slack and recognise that people are generally doing the best they can to be effective within their systems. For example, as we'll discuss later, politicians don't set out to be crap. They are working within a system that's complex, cumbersome, out of date and out of step with its operating environment in the 21st Century.

We'll be going into this in greater detail later when we take a look at systems thinking in Part 3.

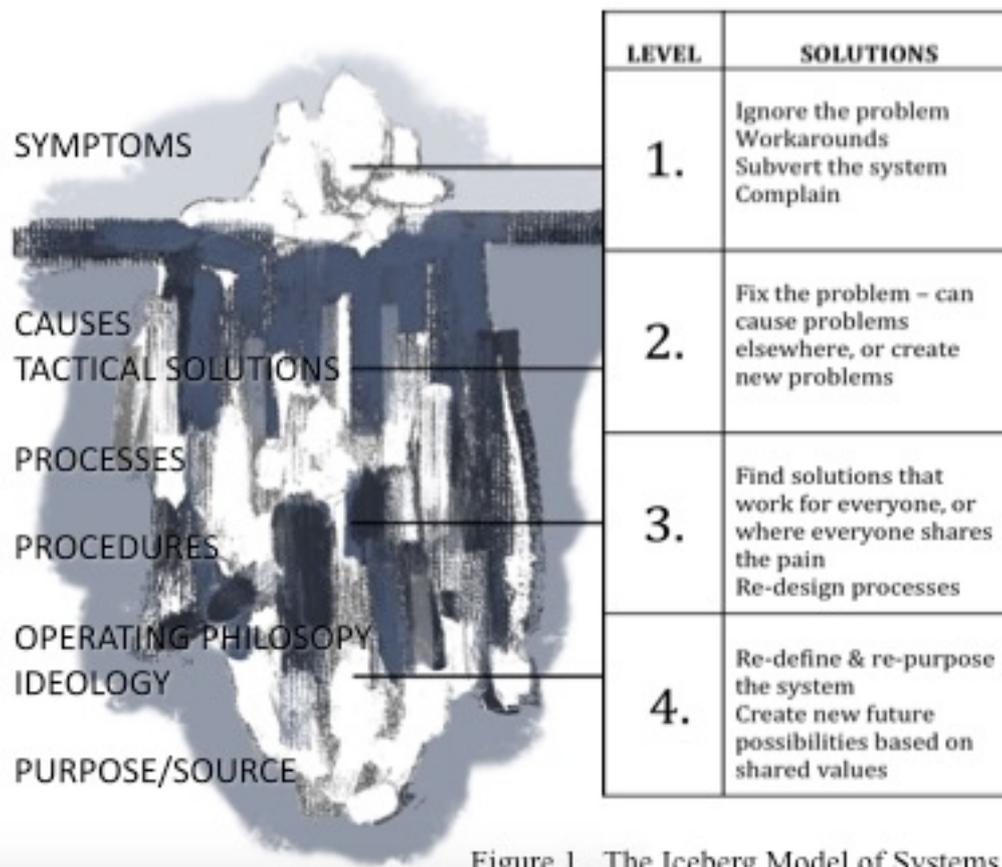


Figure 1. The Iceberg Model of Systems

Why Change Doesn't Stick

Now we can clearly see why most change doesn't stick. We generally address issues at Levels One and Two, by developing coping mechanisms or coming up with tactical solutions. We now know that, unless we change the underlying structures, the system will carry on repeating the patterns of the past.

If we go on a diet, for example, it's a Level Two solution to what we see at Level One, namely that we're unfit and overweight, so the obvious answer is to lose weight. But what we're not addressing are the underlying issues of how we got that way in the first place such as lifestyle choices (Level Three) or values, beliefs and identity (Level Four). So pretty soon we're relieved to get back to our old lifestyle that's in keeping with our old self-image, reproducing the results we don't want.

However, if we want permanent weight loss we really need to work from Level 4 upwards by changing how we view ourselves. When we think of ourselves as a person who is starting to live a fit and healthy lifestyle, we then make Level 3 choices to support that, such as putting in place menu planning and fitness regimes. These processes will in turn cause us to exercise and eat healthily (Level 2), leading to a trimmer, fitter appearance (Level 1).

Exactly the same kind of thinking goes on in organisations. We may embark on a change programme to encourage greater creativity and innovation, but if the system still punishes mistakes and discourages initiative, how effective is this programme likely to be?

Unless there's a deep change in how the organisation thinks, the behaviour will always snap back, like memory glasses, to the old familiar ways.

Again, we'll be revisiting this in Part Three, when we'll be going into the detail of how an effective transformative change process can work.

Icebergs, Icebergs, Everywhere!

But first, let's take a quick but deep dive and see how the Iceberg Model applies to some of the great systems that matter so much to us, and try to understand how and why we feel so disconnected from them...