

Reading the Signals

Signals are the secret to sustainability

Author's note: I wrote this chapter before COVID-19 hit. I'm sure we are all now extremely familiar with the potential impact of major disruptions to our work and personal lives. And all wish that governments globally had read the signals from SARS and MERS, and that coronavirus vaccine research had not been put on hold. Hindsight is wonderful. As you read this chapter, remember the next set of disrupters are waiting patiently. Some are not waiting at all.

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this I am sure of. Those organisations that survive and thrive through the stunning growth in complexity we will see over the next decade will surely be masters of navigating complexity. I use the word navigating advisedly, because if you are unaware of how your organisation's world is shifting in these complex times, you won't be able to manage your way through as effectively as you might. Signals are the secret to sustainability.

Think about the advent of personal computers in the 1980s, email and the internet through the 1990s and the globalisation that followed in the 2000s. In that decade Facebook, Twitter, Instagram and the first smartphone were all launched. Airbnb and Uber also started their disruptive charge. This past decade we have seen the rise and rise of streaming, big data and robots running on AI and machine learning generating new ideas most of us have trouble getting our heads around. Think blockchain and cryptocurrencies, drones delivering parcels, the League of Legends video game that runs 'World Cup' events and the instant phenomenon that was Pokémon Go.

Think about the pace of change created in your life by these events. Now multiply it by a factor of ten as the changes of the last decade become mainstream and new ones arrive.

Driverless cars, to be followed by flying cars; 3D printers creating a house; miniature drones following you on the golf course so you can watch your game from a bird's-eye view when you get home. Can't wait!

What is the risk if you don't read the signals well? The impact is obvious: restructures, buy-outs, insolvency. What of the likelihood? While history is no guarantee of the future, a quick Google search will tell you the average lifespan of companies is falling. At one end of the spectrum, there are some companies that are over 1,000 years old.¹⁷ At the other end, the failure rate for public US companies within five years has increased from 1 in 20 to 1 in 3 over the past 50 years.¹⁸ While there can be a multitude of factors at play, from a growth in entrepreneurial attitudes to oil shocks and global financial crises, one has to recognise the basic shift to high-technology companies (Google, Apple and Microsoft) and an associated transformation of industries through the creation of new business models enabled by technology (Airbnb, Uber).

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The pace of change is snowballing. How much is it increasing? I love the out-of-this-world thinking of Tim Urban and the crew at waitbutwhy.com, and feel the graph in Urban's blog *The AI Revolution: The Road to Superintelligence* captures what is in front of us perfectly (figure 9.1).¹⁹ It's kind of

funny and scary at the same time. And it is the scary bit that I believe should galvanise you to get very good at reading the signals for your organisation or, better still, work with the business to read the signals. Let's start with performance indicators.

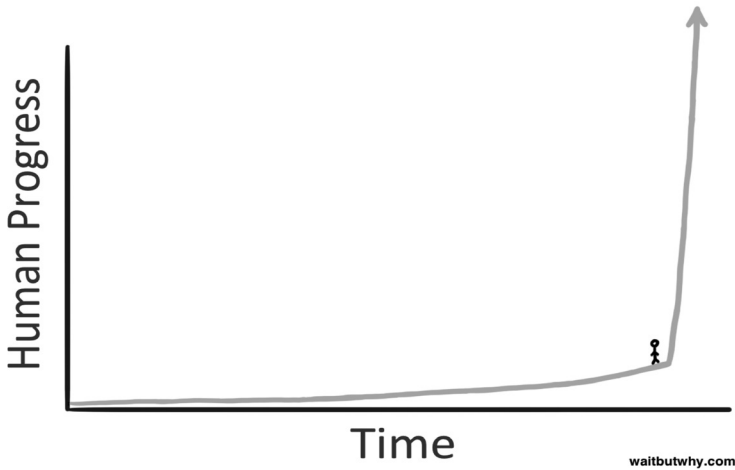


Figure 9.1: Human progress vs time, by Tim Urban, waitbutwhy.com

KPIs and KRIs

Key performance indicators (KPIs) have been part of the business lexicon for a long time. In 1956 V.F. Ridgway published a paper titled 'Dysfunctional Consequences of Performance Measurements' that starts with the sentence 'There is today a strong tendency to state numerically as many as possible of the variables with which management must deal.' So we can safely say KPIs have been a 'thing' for at least 70 years. What of key risk indicators (KRIs)?

First let's be clear. A KRI is simply a subset of a KPI that is commonly referred to as a lead KPI. KPIs are either lead or lag measures: lead, for where we are heading; lag, for where we have been. An example of a lag indicator is profit. An example of a lead indicator of profit is the number of new customer enquiries received via your website. In this example, if you established a high correlation between the number of new customer enquiries and the number of quotes and acceptances by customers, and they were highly correlated to the level of sales, you could suggest the number of new customer enquiries as a KRI, for the risk of not meeting profitability targets.

Given that a KRI is simply a lead KPI, when I work with organisations to develop KRIs I start by asking them, how good are your KPIs? Eighty per cent admit they are poor. If KPIs are done poorly, it makes it very difficult to do KRIs well. If you don't know what measures matter, how can you know what signals to read? At least they are not alone. The problem has been around for decades. In his 1956 paper, V.F. Ridgway wrote, 'What gets measured gets managed — even when it's pointless to measure and manage it, and even if it harms the purpose of the organisation to do so.'²⁰

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Now that we have established the importance of good KPIs

and KRIs and the lack of success many organisations have had in developing them, let's look into how to develop measures that matter.

Measures that matter

KPIs are a decision guide for your staff. They are a guide to what constitutes good customer service, what is a good profit margin, what is a good return on assets employed. And they should be a guide to what truly matters to your organisation. Unfortunately, because we are so damned busy when we finish identifying our strategies for success, we do what so many have done before us and pluck KPIs from

wherever we can find them. We reuse the old, we google to see what others are using and we sit around a table kicking a few ideas around, and presto, here are the KPIs.

Unless you are lucky and your organisation came up with very good KPIs, you are likely to see one of these things happen. They are simply ignored and everyone keeps doing what they have always been doing and only watching the headline numbers. Or the KPIs tend to be biased, even for those organisations running the balanced scorecard concept. And as we found out during the Royal Commission into the Australian finance sector held over

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2018, the bias was against customers, especially the least aware and the most vulnerable. In fact, we were provided with a smorgasbord of examples of KPIs driving the wrong behaviour despite good intentions of identifying what really mattered — sales and consequently profit. There could have been no better example than that of the tellers at CBA putting a little of their own money into kids' bank accounts to meet targets set for new kids' bank accounts, thus earning themselves bonuses!

The best KPIs inform and guide people to consider a range of factors contributing to a decision. The same is true for KRIs. But first you need to know what measures really matter, and that starts with KPIs. If your organisation does not have good KPIs, then that is your first job as a risk adviser. Point out the risk and see that they are improved. I frequently help organisations improve their KPIs. However, if you want a thorough and deliberative process in which you can receive training, I can't go past my colleague Stacey Barr's 'PuMP Approach to Performance Measurement and KPIs'.²¹

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Developing KRIs

As Stacey Barr would attest, one could write a book on KPIs. Hers is 100,000 words long. Because KRIs are KPIs, I'm sure

you can imagine how much one could learn about them. Assuming you want the cut-down version for now, here I provide my top tips for designing and setting KRIs in your organisation.

KISS

As with everything relating to risk, we must avoid the tendency to make KRIs too complex. I have helped clients

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develop KRIs, to find the effort that goes into measuring them a real burden. If systems had been in place it would have been different, but they weren't. We should have taken a different approach.

In general, I feel the right number for any particular subject, such as your strategic plan, a project or a process, is about five KRIs. Sometimes, one or more of those KRIs may be made up of

sub-KRIs. For example, you may have a KRI for customer service. However, it might be a customer service risk index calculated based on four or five sub-KRIs, such as average time to fill an order, max time to fill an order, average time to reply to a customer enquiry and max time to reply to a customer enquiry. You would only do this if, say, 80 per cent of the index was not determined by just one of the sub-KRIs.

Risk profiles

Whether you are designing KRIs for your strategic objectives or a project or process or anything else, go to your

risk profile and identify the key drivers of risk and the key controls on which the management of risk relies. Within the drivers you will find measures that matter. Equally, if key controls are needed to manage a significant risk, then measuring their performance may be critical and hence a KRI can be derived.

Systems

The better your systems, assuming reliable data, the more you can measure and the more you can infer through predictive analytics and machine learning. Once, when I was speaking at a conference for chartered accountants here in Sydney, I asked people to keep their hand in the air if they measured more than 10 KPIs, then 20, 50 and so on. If my memory serves me when I got to 100 there was only one hand up in a room of about 150 people. I asked him how many and he replied 30,000. He was from a media organisation and they were recording everything happening on their website. Hits, hang time, clicking within articles, sharing with friends — you get the drift. My point is that if you have the systems and data governance to do it, you can do some really, really cool and insightful analysis and set up some brilliant early-warning signals.

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Time horizons

My data guru colleague Dr Andrew Pratley has a PhD in Statistics and is Adjunct Lecturer in Business Analytics at the University of Sydney Business School. He has taught me much about measurement in our work with KPIs and KRIs with various clients. A few years ago, when we were touring Australia giving talks on KPIs at various conferences, he introduced me to the Three Horizons of Growth concept introduced by Mehrdad Baghai, Lar Bradshaw, Stephen Coley and David White in their 1999 paper in the *Journal of Business Strategy*.²² Their thesis was that in order to sustain growth you need to be monitoring which parts of the business are in mature, emergent and embryonic phases, and you need to keep feeding the growth pipeline with new products and services as existing ones fade away.

This led to what I consider some important thinking about strategy and risk over three time horizons that culminated in my development of the strategy funnel in the midst of the COVID-19 pandemic, which I introduce in the next section. In figure 9.2 I show the relationship between strategy and risk over three time horizons. I show the timelines I most commonly find organisations use for their planning. They are one year for executing annual operating plans and managing what is commonly called operational risk; two to five years for strategic planning and strategic risk; and for the last time horizon I use three to thirty years. Three years is highly uncertain for many companies, while the Australian Department of Defence works on thirty-year plans, given

it takes more than a decade to develop large strategic assets such as ships and submarines.

The importance of this type of thinking when it comes to KRIs is that for operational risks you are measuring more clearly seen, but not necessarily understood, risks and their controls. So there is a stronger focus for KRIs on controls, whereas strategic risk is more about identifying good lead KPIs to use as KRIs. When it comes to emerging risks, this is much more about reading the signals. And reading signals coming from over the horizon is inherently difficult, which leads nicely into the strategy funnel described in the following pages.

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Figure 9.2: The relationship between strategy and risk over three time horizons

The strategy funnel

In developing my strategy funnel concept, I've taken a sales and marketing tool, the sales funnel, and given it a strategic twist. If you are familiar with the sales funnel you will know that prospective customers are moved through or out of the funnel via sales and/or marketing contact points. For example, by clicking on an advertisement they enter the funnel; if they are enticed to fill out an enquiry form for a call from a sales rep they have moved along the funnel; once the sales call has been made and the prospective customer's problem defined they have moved further along, and so on. Sales teams track how many prospective customers are at each stage of the sales funnel because they know their typical attrition rates. For example, for every 100 people

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that click on an ad, 10 fill out an enquiry form, and of them 7 go on to quotation and on average 5 become customers. So if they are not hitting their numbers at any stage in the funnel, they can seek to diagnose the problem and take action.

The concept of the strategy funnel is illustrated in figure 9.3 and works like this. There are many possible futures playing out for your organisation, none of which you can be certain of. The further out in time you look, the more uncertain the view. Nothing new here. What is your response? Generally, scenario planning and forecasting.

The strategy funnel concept asks you to develop scenarios for your second (Planning) and third (Imagining) time horizons. Once you have them, you do two things.

First and most important is you orientate your strategy to accommodate as many future scenarios as you can with a focus on the ones deemed most likely. Second, you pop them in the top of the funnel. The scenarios built on the furthest time horizons are at the top of the funnel, as they are the ones with greatest uncertainty and greatest variability between good and bad outcomes. The further down in the funnel, the more certainty and the less variability prevails. Now you are able to move the scenarios through the funnel over time by testing the assumptions made or monitoring the outcomes within each scenario.

In the sales funnel analogy, prospective customers exit the funnel as a lost prospect at any stage of the funnel. In the strategy funnel concept, a scenario exits the funnel or is modified if proven to be way off the mark.

One question that needs answering is ‘How many scenarios?’ I read once that the answer is four because if you do three, one good, one bad and one in the middle, then management always plans for the middle one. By having four, it forces

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management to focus more one way or another based on the most likely outcomes. The strategy funnel is different, in that it asks you to develop multiple scenarios at multiple time horizons. How many at each time horizon is a matter of resources. If you are from BHP Billiton, would it be too resource intensive to build four, one at each of the ‘planning’ and ‘imagining’ time horizons? If you are a small business operator, you might still do four but with less detail.

Another question that needs answering is ‘What criteria do I use to exit a scenario?’ How many assumptions or outcomes prove incorrect? The answer is that it is not a case of numbers unless you are doing some sophisticated modelling, which I discuss briefly in the next chapter. You would base it on judgement, just as you used judgement to develop the scenarios in the first place.

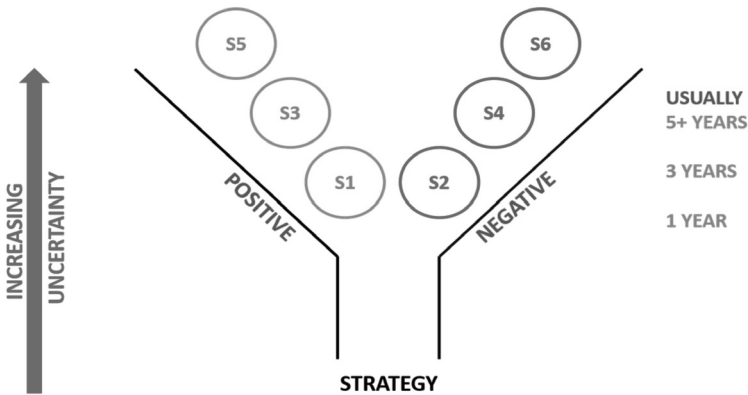


Figure 9.3: The strategy funnel

Do Black Swans send signals?

You have likely heard of ‘Black Swans’ or ‘Black Swan Events’ (no, I am not going to refer to them as BSEs). The phrase was coined by Nassim Taleb in his book *The Black Swan: The Impact of the Highly Improbable*.²³ Taleb argues that some things simply cannot be predicted, so don’t try. The example he uses is the black swan. Prior to the first visits of non-Indigenous people to the land now known as Australia, there was nothing in the non-Indigenous person’s concept of a swan that would lead them to think of a black swan.

Why? Because black swans exist only in Australia. So you can well imagine when Dutch explorer Dirk Hartog came upon the west coast of Australia in 1616 that it was highly unlikely he would have turned to his second-in-command and said, ‘I bet you a gulden that when we get off this ship we will find a black swan.’ The idea would have been ludicrous.

What lessons does Taleb take from this knowledge that, despite what you want to believe, some things can go wrong no matter how well you have planned them? His tip is to always have something in reserve. This type of thinking is a core element of sound risk-based decision making and I like to cover it off with the old saying, ‘Remember rule number one!’ and for me that is: ‘Never bite off

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more than you can chew.’ I follow this up closely with rule number two, which is: ‘Only break rule number one if you have no other choice.’ Some risks simply have to be taken if we are to survive.

So do Black Swans send signals? In short, no. If it is a true Black Swan, we would not see it coming. I am near finishing this book in the midst of COVID-19. While some have referred to this pandemic as a Black Swan, many critics I have read agree with me that it is not. We had many, many signals. We had previous outbreaks of a coronavirus

that killed many people and was pretty infectious. We had many, many warnings from health practitioners and from politicians. And governments the world over had run disaster scenario exercises with pandemics way worse than COVID-19 is proving.

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What about the BP oil spill in the Gulf of Mexico in 2010, another event often referred to as a Black Swan? Were there previous examples of untapped underwater blow-outs of well heads? Yes. Taylor Energy in 2004.²⁴ Did they have any signals of the devastation that could be caused by a massive oil leak? Yes. *Exxon Valdez* 1989. Did authorities know there was no proven methods of capping a well in deep water? Well, they should have asked the question as there

is a multitude of examples of failed safety shut-off systems in the oil and gas industry. So, no, not a Black Swan.

What, then, is a Black Swan? Taleb refers to events like the advent of the world wide web and the 9/11 terrorist attacks on the World Trade Center in 2001. However, he is quick to point out that each depends on the observer. Many in the scientific community predicted something like the internet.

As one observer, when I awoke to the news of 9/11 here in Sydney, Australia, the events in front of me were beyond my wildest imagination and so it was a Black Swan. However, later inquiries into 9/11 showed there were clear signals for those in US intelligence that a 9/11-type event was possible.²⁵ Still, I'm sure the ultimate targets and what happened to those targets were a massive surprise to most in the community.

Again, depending on resources, you should be looking for signals of rare, big positive and negative events. In terms of technology, one source of signals and their interpretation is available from the Future Today Institute (FTI). In fact, the 'Time Cone for Strategic Planning' in their Tech Trends Report 2020 led me to consider their approach alongside my risk over three time horizons, and from there the strategy funnel was born. The

The FTI approach is to develop identifiable trends from signals as they grow in strength, then to categorise each trend into one of four action quadrants: Act Now, Informs Strategy, Keep Vigilant, Watch and Revisit Later.

FTI approach is to develop identifiable trends from signals as they grow in strength, then to categorise each trend into one of four action quadrants: Act Now, Informs Strategy, Keep Vigilant, Watch and Revisit Later (see figure 9.4). This approach is reflected in how you move scenarios through the strategy funnel.

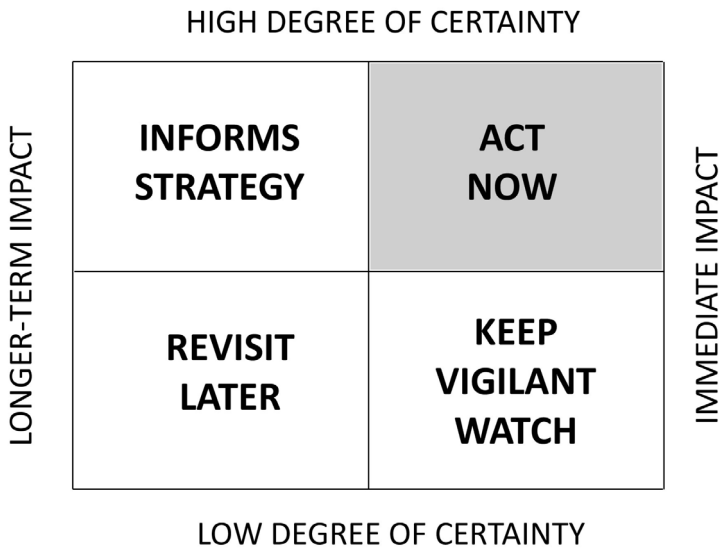


Figure 9.4: Future Today Institute's action matrix

Before I leave this chapter, let me explain what I learned about reading the signals during COVID-19.

Planning in pandemics

One key learning from the pandemic is that everyone has a different appetite for risk when it comes to COVID-19.

Naturally most, although not all, people in their seventies and older are more cautious given their higher risk of death if they contract the virus. Similarly, different countries have seen the risk of long-term economic damage of COVID-19 as much higher than the health risk and have accepted higher fatality rates, while countries like New Zealand locked down early and hard. The number one takeaway from this is that you and your organisation need to plan based on your government's strategy. It is not a choice you can make.

Similarly, you cannot choose how your customers might react, whether they hoard your product (toilet paper?) or ban your staff from entering their premises, effectively halting all of your business with them. Nor can you know with certainty when they will change their minds. So the level of uncertainty, as if you needed telling, is extremely high compared to the norm. What this means is the timeline you use for your strategy funnel moves from years to months. Instead of annual review scenario planning for 3–5 and 5–30 years out, it becomes monthly scenario planning for 3–5 and 5–30 months out. There is only one bit of good news from this: you get to find out how good your scenario planning is much sooner than you might otherwise.

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Let me suggest as an example an operator of a fine dining group of restaurants using two scenarios at the six months horizon (figure 9.5). At the time of writing there were signs of a second wave of the virus occurring in Australia, and pubs and restaurants were open, but with social distancing restrictions limiting the number of patrons to generally unaffordable levels if not for government wage support.

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The challenge now faced is how you orientate your strategy. Can you devise a way of running your business so it can be profitable under both scenarios? For example, can you run a menu set that is cost effective enough, but of sufficient quality, to allow you to charge enough to make a profit? Can you get more efficient in your kitchen so you need fewer staff? Can you centralise some food prep? Can you keep enough cash reserves to outlast your competitors when government support ends and the industry faces the inevitable rationalisation should a vaccine not become available? Can you innovate your business model — for example, by developing an at-home fine dining experience using catering equipment and a team of otherwise unemployed mobile chefs?

Scenario 1: Good 6-month scenario	Scenario 2: Bad 6-month scenario
<p>🕒 The virus: Second wave minimal and controlled. Contact tracing and testing strategy is highly effective. No vaccine available for the foreseeable future.</p>	<p>🕒 The virus: Second wave arrived and health authorities lost control initially, but with spring regained control. No vaccine available for the foreseeable future.</p>
<p>🕒 Social distancing restrictions: The 4-square-metre restriction capping the number of patrons inside venues is lifted.</p>	<p>🕒 Social distancing restrictions: Strict social distancing was reintroduced in July, and pubs and restaurants were closed again through to November 2020.</p>
<p>🕒 The government (economy): Direct financial support to pay employees (JobKeeper) is not cut off at end of September. It is phased out via monthly reductions through to 31 December 2020.</p>	<p>🕒 The government (economy): Direct financial support to pay employees (JobKeeper) is not cut off at end of September. It is phased out via monthly reductions through to 31 December 2020.</p>
<p>🕒 The borders: Interstate borders are fully open. International visitors are welcome but must be tested on arrival and quarantined for 24 hours until test result received.</p>	<p>🕒 The borders: Interstate borders between NSW and Victoria are open; all other borders are closed. International visitors remain banned.</p>
<p>🕒 The public (economy): The level of spending stays steady through the back end of 2020.</p>	<p>🕒 The public (economy): The level of spending returns to June levels by November 2020.</p>
<p>🕒 The public (health): The vast majority feel comfortable enough to visit pubs and restaurants.</p>	<p>🕒 The public (health): A healthy majority of people return to pubs and clubs by late spring (November).</p>

Figure 9.5: Sample scenarios prepared in June 2020

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The answers will of course be different based on the locations and types of clientele you used to have. If you depended on overseas tourists, you will need to add assumptions about whether local tourism will fill the void in full, in part or not at all. Next you work hard on your strategy for one month, doing your best not to second-guess your assumptions unless something major happens. Then revisit the two scenarios at the end of the month. As I wrote when introducing the strategy funnel, the scenarios will change or might be completely jettisoned if your assumptions prove very different from the unfolding reality.

As promised earlier, let's now move on to the topic of quantifying risk.