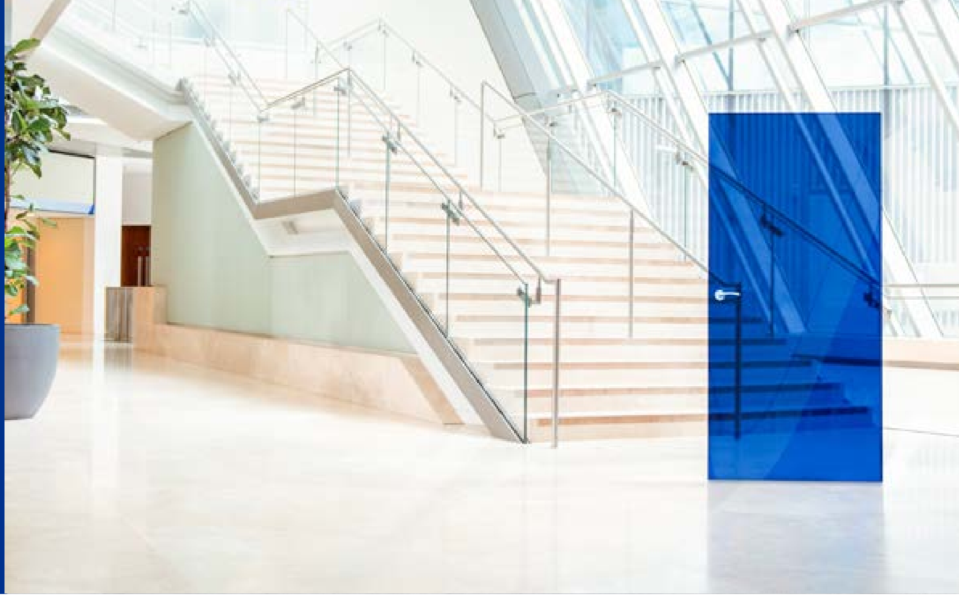
# A conversation about Dynamic Risk Assessment

KPMG Board Leadership Centre



In a world that feels more laden with risk than ever before, Dr Andries Terblanche, Global Head of Dynamic Risk Assessment at KPMG, joined our Board Leadership Centre FTSE350 meeting to discuss how a dynamic approach is needed to understanding, mapping and mitigating the risks around us.

If risk management ever was a theoretical exercise, in present times it has become extremely real. COVID-19 dominates of course, but other factors – many of them interlinked with the pandemic - such as recessionary threats, supply chain risks, political instability and climate change also loom large. This is leading to live discussions and debate in boardrooms and audit and risk committees about how organisations can navigate their way, and how best to allocate and prioritise resources.

The current environment underlines the fact that risks are not contained and cannot be considered in isolation. Their interconnectedness means that a static approach – with risk strategy reviewed perhaps once a year – is simply not sufficient. A more dynamic model is needed, in which risk and risk management are not viewed as back-up adjuncts to the business – but are continuously at the heart of strategic thinking and planning.

Dynamic Risk Assessment (DRA) is a methodology that has been applied in over 500 organisations worldwide already and has been discussed at the World Economic Forum and the World Business Council for Sustainable Development.

## Changing environments, changing risks

Key to DRA is to understand that the world of risk itself is dynamic. Risks change and mutate as the world changes. Different eras have different characteristics and therefore generate different risk profiles. As Andries warned: "When we apply risk thinking from one era into another, that's when danger looms. The models used won't remain equally reliable. Over time enterprise risks are not mean reverting."

With COVID-19, we have entered into a new era. It is doubtful that the world, and the way business operates, will ever be quite the same as it was before the pandemic struck. This means that now is the time for many organisations to reappraise how they approach and manage risk.

Andries identified four broad eras in the last couple of centuries. Firstly, there was the age of Empire – a time, for Britain, of great expansion and indeed globalisation. The second era was the period of de-globalisation between the two world wars. This was followed by the third era that was established by the Bretton Woods system of negotiated monetary management: a very stable period of fixed exchange rates (tied to the price of gold), with only a handful of countries participating in the global economy, when derivatives did not exist, and of limited travel and mobility.

In the fourth era, from the 1980s onwards, the most significant period of globalisation in our history began, championed by Margaret Thatcher and Ronald Reagan. Capital became hugely more mobile around the world. Travel boomed (from 330m airline tickets sold a year in the Bretton Woods era to 4.2bn before the pandemic). Supply chains extended beyond national borders. Financial instruments and derivatives were created. Technology and the internet took off, sending information – true or untrue – around the world in seconds.

## The network concept

All of these factors have created new and greater risks over time, which are amplified further through the 'network effect'. Our world has become a series of interlinking networks – of capital, foreign direct investment, financial instruments, supply chains, technology and communications, people and travel. These networks change and heighten risks because they now become interconnected, so that a downside event in one can trigger ripples and knock-on effects in others – what Andries calls "contagion".

"We need to bring the dimension of networks into the risk realm," Andries says. "Network analysis has to inform the approach. Networks transmit risks in ways that statistical tools grapple to accommodate."

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Andries highlighted that a number of Nobel Prize-winning risk models have in fact failed to predict or pick up on factors that have emerged as major risks in the post-1980s era. Statistical and probabilistic models, on their own, have become challenged.

### DRA – and the power of collective thinking

To help combat these challenges, DRA is based around two key concepts. Firstly, network analysis. Secondly, it is deeply grounded in people and collective thinking (rather than merely relying on past data). This is important because, as Andries observed: "Extensive research has repeatedly found that, if you ask a diverse range of people about their views of the future, the results are more accurate than the results of probabilistic models during times of rapid change."

The DRA process begins by identifying people in an organisation who are likely to have the most accurate views about the future and future risks – 'super-forecasters'. A process of expert elicitation begins, with the individuals taken through a highly structured interview. The next step is to interview everyone collectively together – when insights invariably become even richer, deeper and more pertinent. After this, individuals take a gamified survey in which they are asked to quantify the likelihood of each risk identified, along with the severity, velocity and interconnectedness.

From this, mathematical, AI-powered and graph theory techniques can be used to generate a cognitive risk network that best represents how the super-forecasters think about the future. Andries describes it as "an artefact of how the smartest people in the organisation think about the risks pertaining to it. Crucially, this contains mapping of which other risks a given risk could trigger, and how rapid and severe the effects of that would be." This network, in turn, allows the identification of risk clusters (expected short-term scenarios  as well as the longer-term risk profile, and how to best change that outcome if it exceeds the risk appetite.

### DRA in action

DRA has already proven its worth in the COVID-19 era. Andries described how one global organisation went through the process right at the start of the pandemic.

The principal risks were anticipated to be around managing remote working and the possible mental health impacts of the crisis on staff. Instead, DRA helped to identify other risks that were equally, or even more significant: the possibility of increased global bifurcation between the US and China with growing trade tensions and barriers; an acceleration of the customer moving to digital channels (where the business was lagging its competitors); and a growing emphasis on doing business locally (whereas the business had a very global approach). In short, the exercise helped focus the board on the real strategic issues.

### Making it BAU

Attendees were in wide agreement about the risk management imperative – and the need to make sure it is brought directly into strategic discussions. As one attendee put it, "risk considerations can't be a separate audit committee discussion – they must be integrated into the boardroom agendas too". With the audit so focused on financial reporting areas when the biggest risks seem to arise out of strategic exposures, another asked whether auditors need to adjust their focus? Certainly, strategic issues need to be considered in any auditor's thinking – but this is also an aspect where the 3 Lines of Defence model can play a significant role.

One attendee observed that DRA can't be a 'one-off' exercise and that organisations need to find ways of continually reappraising and updating their view of risk. As Andries described, many clients go through the DRA process at least annually.

As another put it, risk management is in many ways what all business actually *is*. But we have turned it into a function. This must be addressed, in the post-pandemic era, more than ever. Risk management must be dynamic, forward-looking and highly responsive – and built into the very DNA of a business.

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