

Q&A on good decision-making and “the psychology of risk”

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Interviewee: [Mark Boulton](#) – Director, [DNV GL](#)

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Mark,

Thank you for taking the time to discuss with me “the psychology of risk”, and how good risk management can aid good decision-making. It is a “hot topic”.

I'd like to start by asking you a question about the interconnected world that we live in. It seems that everything we do is interconnected, which makes for an increasingly complex environment. I wonder if organisations, large and small, are struggling to unravel and understand true insights into the uncertainties they face. I wondered what your views are on this.

***Mark:** I think the world is being increasingly influenced by greater interconnectivity between organisations and systems, with changes and events flowing fluidly and quickly from one part to another. The speed with which events flow through an ecosystem is why, in recent years, I think people rightly talk about how outcomes and consequences from events evolve more quickly than in times past. The consequences and knock-on effects from events sometimes scale up rapidly into ways we did not imagine.*

To me, the interconnected world of today means that there is a lot more emphasis on understanding the impacts and consequences that different events could have, and what the knock-on effects throughout the chain (or in the ecosystem) could be. There is a need to understand the greater complexity in what could initiate or cause an event to begin with. The complexity we face means that we need to spend quality time to think through scenarios and risk techniques that can help us do this.

Resilience is also a key consideration in this. Understanding how to put in place good organisational resilience is, I think, more important nowadays than in the past because of our need to respond to situations quickly, to prevent / mitigate them progressing in ways that are difficult to predict and, sometimes, hard to control.

That leads me onto the concept of Functional Resonance ¹ – An awareness of what is connected to what – and the degree to which one function causes the consequences of an event to progress to another function and the resulting impact.

Gareth: Is having a good understanding of Functional Resonance the same as the concepts of a High Reliability Organisation, Mark?

Not quite, though they both relate to resilience. High reliability organisations (HROs) are those that truly prioritise safety and there is a strong focus on culture, which I think we will get to shortly.

The thinking towards functional resonance is not prevalent when we deal with operational risk today. There are understandable reasons for this.

For example, when we go through operational risk assessments we tend to think about the direct causes and consequences that an event will have on our operations, which need to be addressed directly within that operation. By way of illustration, if you were planning emergency response for a chemical plant you are likely to primarily focus on handling the direct consequences of that incident.

Functional resonance encourages us to think more broadly, about how an event impacts the extended enterprise and the supply chain.

For example, consider the knock-on effects on a customer who cannot use your products if your plant/operations experience a disruption. If we consider the broader view, it is not only your direct customers you have to consider but also your customer's customers. How do you inform them about your risks and how they affect them?

One of the things we can focus on is to connect detailed operational level risk management with the business level. When you consider operational work and risk, you typically do it with operational personnel. This is of course important as they have the knowledge required to identify and assess the risk for their area, but we need others with business knowledge to partake in this planning to understand the functional resonance (how we may impact others). Maybe it's best to separate the two aspects into individual discussions, but they both need to be undertaken.

The thinking around business continuity management tries to approach business disruption in this way, as well.

We also need to remember that no model is perfect. To build up resilience we need to think about scenarios and test how we would respond and learn from them.

One example that comes to my mind is the work of James Reason when he talked about the healthcare industry. Reason describes frontline healthcare workers as "the harm absorbers" – people pick up what's happening and adapt and modify their actions daily to stop things going badly wrong, and therefore prevent them passing on to "the next level". This description is like feedback loops in functional resonance. It's about absorbing fluctuations. If one function can't cope with fluctuations, it could cause a large deviation in the next function, passing on problems.

So, applying this concept to operational and strategic risk, we can ask if there are examples in the past when events have happened, and dealt with quickly (they were “absorbed”), but which could have blown up / escalated and can you learn from them?

Gareth: This point, about learning from past events in a rounded manner, reminds me of a report that came out late last year from Lloyds, on [Counterfactual Analysis](#) – looking at past events and understanding how they might have played out differently in order to be more resilient for the future.

As we think through and understand uncertainty, we need to be mindful of our cognitive biases. We can obtain good data, but if we let our biases control our decisions, we won’t make the best use of the data available to us. Do you think we are currently finding the right balance between being data-led and using our intuition, and are we doing the right things to de-bias our decision-making?

Mark: *There are many elements to handling bias. I’ll start by talking about risks. We know that risk management effort should be proportionate to the risk. We typically need structured processes to deal with our largest risks, with a broad, well-rounded and deep risk assessment.*

One of the big issues where bias comes in is when people look at assessing risk with relative likelihood and consequence/impact, and then how they choose to act upon the risk that has been assessed. People have different perceptions of both likelihood and consequence/impact. One person’s high impact, high likelihood risk is another person’s medium impact, low likelihood risk. We need to appreciate different perspectives, and we need to step back and look at large risks over the long-term to fully appreciate them.

For both likelihood and consequence/impact considerations, it is best to move away from using vague descriptions to categorise “levels”, because this leads to wide-ranging interpretations. We need to express likelihood and consequence/impact in terms that everyone will clearly understand. Using general descriptions doesn’t work, even using “a 1 in 10” or “a 1 in 1000” quantification is usually insufficient. Try using descriptions such as “it is expected to occur within a working year”, “it is expected to occur twice in a year”, or “based on operating 100 facilities, it is expected to occur 5 times”. Of course, we can, and we should, consult data records as part of our assessment. What we are trying to do is to get judgement balancing and working with data. Remember also that historical experience does not determine the future.

When you are assessing risks in groups (to canvass broad views) can voting systems help? Like the Delphi technique, for example.

We also need to look at how we de-bias decisions on actions to take for different risks. If a risk is agreed as significant, a first recommendation could be to obtain more data and analysis to inform a future decision, rather than deciding on what to do about the risk 'there and then' without good data to help to reach an informed judgement. Of course, there are times when you do not have time to do everything you want to do, and you need to decide "in uncertainty". Also, remember that quantitative data can be valuable, but we need to use it properly, to use "the human element" to turn it into information and knowledge given the context to the situation we face.

It's interesting also to consider how standards and norms change over time – in general and in industries. Do we always see the change? Often not; often it occurs slowly, yet significantly, over time. People who are ingrained in a historical standard will deem a risk as acceptable, whereas people who challenge the status quo will not deem it acceptable. Different schools of thought help us to see different perspectives.

Gareth: This point you have just made reminds me of [the Johari window](#), and how it can be used to help us broaden our understanding of what others think and know, and what we share with others, and to acknowledge that there are "unknown unknowns".

It also brings me onto how we see insights. [Gary Klein](#) has undertaken and written about [the ways that people see insights](#) in books, research papers, and articles for the Harvard Business Review and other publications. In his book, Seeing What Other's Don't, Gary talks about how we could see more insights if we spend less time on reducing errors, and more time being curious, seeing connections, spotting contradictions and coincidences, and recognising when we are faced with "creative desperation" (meaning that we have an urgent problem to solve).

Do you think we spend enough time focusing on insights, or too much time looking at and reacting to things we already know about? Or is the focus about right, most of the time?

Mark: *A lot depends on the processes and procedures that people use in their sphere of operation and responsibility.*

Some teams may see risk management as a tick-box compliance requirement, some see it as value-adding to their operations and businesses.

Whether people view risk management to see insights may be a reflection of their risk appetite – are they willing to think about added value they can gain, or is their focus on complying with regulations and legislation?

I'd like to think that risk and insights (and benefits management) thinking can be coupled together, for both strategy and operations. This is of course broader than looking at financial targets and risks. Organising discussions about risk should involve people with a broad cross-section of views (such as new technology impacts, business savvy, and other aspects). You want people to challenge and ask why things are the way they are or perceived to be.

Having a blend of people with experience in different areas is important, as is having a good facilitator to keep the discussion flowing and asking “innocent” questions. These discussions need good preparation, to be set up in a structure with people buying into it.

People need to be prepared to change their minds as the discussion progresses. That is important (and it relates to how to de-bias views and decisions, which we talked about earlier).

Gareth: I'd like to talk now about a subject that relates to this discussion about seeing insights – and that is of culture, and the impact it has on how people take and manage risk in their everyday activities. I wondered if you could describe what you see as a positive culture and how it can make a significant impact on taking and managing risk.

Mark: *A feature of a positive risk culture, in my view, is when people maintain an awareness that things may not happen in the way they think they will happen.*

Let me explain what I mean by this point. Let's say that I am running a project. I will have a vision on what's meant to happen for this project to succeed. I drive decisions to achieve my plan. When I am “in the detail of my project”, having the ability and self-awareness to recognise a situation and modify my approach in an active risk world, before something changes or may go wrong, is a sign of a positive and forward-thinking culture (and it is a good skill to have).

Weighing against this mindset is the pressure to “get the job done”. Taking the time to stop and look at where you are, and where you are heading, can be hard to do given the daily pressures we all face.

Your management can help you to use and embed this mindset and culture by themselves emphasising the importance of “stopping and taking perspective” at the right moment in time. They should welcome this and take the time to listen to you to understand what's happening and be prepared to help you and your team when you get a sense that things might be changing.

What this translates to is your ability to pick up on what is important and what may be changing ahead of time, protects, and creates, value. The better you can see potential events coming and act to guard against them, the better your outcomes will be.

Gareth: Is there anything else related to this discussion that we haven't covered and which you would like to raise? I'd be very interested to know what you and your colleagues in DNV-GL are seeing around the world.

Mark:

I have recently been working with a DNV GL colleague for a customer where we worked on understanding on how people's psychology affects their behaviour, and how to encourage good risk / safety behaviour. This has looked at both "hearts and minds" and enabling the desired behaviours and actions, taking into consideration the local culture. With colleagues in DNV GL, we are also looking the use of the developing technologies to support risk management and risk decision making, including digitisation, machine learning and artificial intelligence. This is very forward thinking and part of the research and innovation activities of the company.

Gareth: Lastly, I'd like to finish by asking if you are following any particular thought leaders on risk management at the moment, whose work people reading this interview may find of interest. Is there anything that the IRM's Innovation Special Interest Group, which I know you are part of, is working on relating to the topics we've discussed in this interview?

Mark:

The IRM's Innovation Special Interest Group (SIG) is an excellent place for conversations with other risk professionals who are looking at the challenges for risk management now and in the future. It is not just a place to talk, but the members also investigate different topics and share their findings. Currently, the SIG is working on "horizon scanning" to identify, and hence help manage, future / emerging risks. I do value the work and conversations I have had with colleagues in and outside that group, as it challenges and helps me evolve my thinking on risk management and hence, I get better at what I do. I can say the same about talking with colleagues in DNV GL, the risk standards committee in the UK, my customers, and from other forums, including conversations with yourself! I have read a few risk related books recently by Norman Marks and Erik Hollnagel. I go through the Enterprise Risk magazine (www.enterpriseriskmag.com) when I get it each month. There is an excellent article "[Thrill-Based Risk Management](#)" in the last issue (not that I am too biased on its quality as one of the authors!). I will let your readers make their own judgement on it.

Thank you very much for your time, Mark.

Notes:

1 for information about functional resonance, various resources exist, including functionalresonance.com:

<http://functionalresonance.com/brief-introduction-to-fram/index.html>